

# SOUDAL

## PROFESSIONAL CONSTRUCTION & INDUSTRIAL PRODUCTS



## SOUDAL POLYURETHANE FOAMS

Soudal is Europe's leading independent manufacturer of sealants, PU Foams and adhesives, serving professionals in construction, retail channels and industrial assembly. With 45 years of experience, 11 manufacturing sites on 4 continents and 35 subsidiaries all over the world, Soudal products are highly regarded by end-users in over 130 countries worldwide.

Soudal's PU foams are one-component, self-expanding foams in pressurized aerosol cans, and can be applied using either a straw, or a foam gun. With its many years of experience in manufacturing and technical expertise, Soudal foams are of very high quality, with high stability and excellent foam structure.

Polyurethane foam (PU foam) is a versatile chemical product used in many common construction applications which require adhesive bonding, filling, sealing, and insulation. Its high thermal and acoustic insulation properties makes it an excellent product for applications such as insulation of water pipes, bonding and sealing of roofs and walls, and installation of door and window frames.

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EXPERTS IN SEALANTS, FOAMS, AND ADHESIVES



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# HIGH YIELD, SELF-EXPANDING FOAMS

Soudal PU foams are one-component, easy-to-use PU foams that are applied either through PU foam guns (gun foams) or through included manual straw applicators (straw foams). Once extruded from the applicator, PU foams expand in size through reactions with moisture in the environment. When fully cured, PU foams are semi-rigid with resistance to water and chemicals, making them an ideal product for sealing and filling large voids and gaps with a requirement of durability.

Fully-cured PU foam is made of millions of tiny cells - these cell structures give foams excellent insulation properties, and make PU foams a superb product for applications where thermal and acoustic insulation of the gap filler is desired, such as for the filling of gaps between wall and window-frame.

Its self-expansion properties make Soudal PU foams a high-value proposition. Each 750 ml can of foam can achieve up to 60 litres of cured foam.

Soudal PU foams are formulated over decades of experience to combine yield, density, cell structure, and stability. All to achieve the superb performance and exceptional value that Soudal is known for.



## Open-cell PU Foam Technology: *Achieving the optimal balance of foam properties*

All PU foams need to achieve a delicate balance between density, yield, and strength. Too dense, and you have poor insulation and poor yield, bringing poor value. Not dense enough, and your foams face a risk of collapsing and having poor durability. Soudal's answer to the problem? Open-cell PU foam technology.

Many manufacturers can easily make a closed-cell PU foam, which explains why all the foams out there are low on yield and of very high density. Achieving a right open-cell formulation takes years of work and research to perfect, because it's such a delicate process. As a world leader in PU foams and its related technologies, Soudal has developed its proprietary formulations and manufacturing processes to fully implement open cells in its PU foam products.

The result? A very strong PU foam that combines medium density with open cells that strikes all the right balances in achieving high yield, high strength, and high durability. Besides increasing yield, open-cell technology brings about many advantages, such as controlled expansion, quicker curing, increased stability, and a very fine and uniform cell structure.



### Higher Yield: *Simply - more foam per can*

This is the most simple calculation to derive the value of a PU foam. Yield is the figure of cured foam that can be extruded from a can. A higher yield means you can fill more joints and fill more gaps with each can. In our testing, Soudal foams can outperform competitor foams by more than 30% solely in terms of yield. This means that you require 30% less products to do the same application. This also means that at the same price, Soudal foams are up to 30% cheaper than other brands.

Soudal foams achieve their high yield through the combination of lowering density and opening cells, delivering a product of unmatched value.

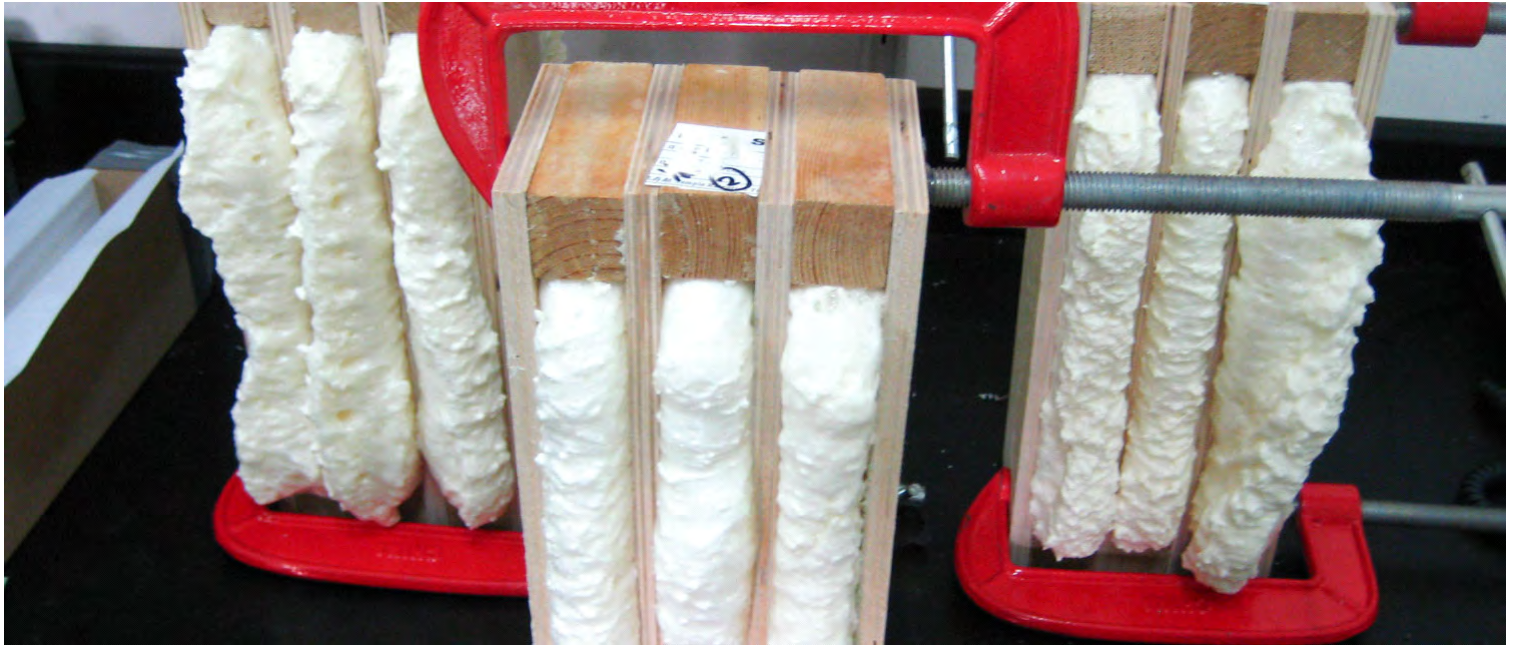
Each can of Soudal PU foam can deliver up to 43 litres of cured foam. And unlike other claims, this estimation is based on the international FEICA TM 1003-2010 test method standard, so you know exactly what you're getting.

### Better Insulation: *Create a barrier to save energy*

Joints are always the weak link in a building's insulation. What's the use of installing an expensive double-glazed window, when you fill the window joints with cement? Cement has thermal conductivity of 0.29 W/mk. PU foam? 0.03 W/mk. A lower figure means better insulation. Do the math.

Many people have the misconception that thermal insulation is only important for cold countries, where the disparity of indoor and outdoor temperatures may reach as much as 30 degrees Celsius. But not many realize how much energy can be saved on air-conditioning in a hot country like Singapore, simply by using high-insulation building materials. Why? It takes much more energy to cool a room, than to heat it up. If you need an explanation, just begin by thinking about how easy it is to create heat with electricity - all you need is some resistance. Cooling a room can cost three times as much as heating a room.

Also, it's not just about thermal insulation. In today's cities with its never-ending bustle and traffic, a little silence at home and in the office is a prized commodity. PU foam has acoustic insulation of more than 50 dB, as compared to mineral wool, itself a good insulator but only managing 40 dB of sound insulation. Insulation even differs between foams. Soudal foams, with its medium density, open cells, and uniform cell structure will ensure the best insulation properties for your applications.



### Controlled Expansion: *For accurate dosing and reduced wastage*

Many foam manufacturers boast about their high expansion properties. Soudal is different.

Immediately after extrusion, Soudal foams have what we term “controlled expansion”. This means that sweet spot of having enough expansion to fill a gap, and yet not too much expansion that ends up being cut away as wastage.

This is in contrast to many other foams which expand uncontrollably out of a joint, and users are often left with a lot of guesswork of how much of the joint to fill to minimize wastage. With Soudal, it’s simple. Accurate dosing is key - our foams will expand, but not so much that it all ends up in the trash.

### Superior Dimensional Stability: *Filling joints, not bending them*

Soudal PU foams use its open cells and controlled expansion to limit the curing pressure and to stabilize its structure, so it fills your joints, not bend them.

Products with poor dimensional stability can create excessive curing pressure in the process of expansion, or even continue to expand for days after curing (also called post-expansion). These can lead to problems with warping and bending building materials out of shape, which in turn can cause more problems. Ever experienced a door that was very difficult to open and close? Could be a poor quality foam. Small problem, but very annoying.

Soudal products are extremely stable, both during curing and after curing, and will never develop excessive pressure, nor have problems with post-expansion, all thanks to Soudal’s proprietary formulations.



### Superb Shelf-life: *Better, for longer*

PU foams are very sensitive, even before extrusion. The stability of the foam refers to how long a product can be kept, and how much degradation occurs over time.

Soudal foams are formulated to be chemically stable within the can for a longer period of time, and aged cans of Soudal PU foam can deliver significantly better quality than comparable competitor products.

Soudal has also invested considerable time and effort in creating the best canister design with its valve and nozzle systems.

### Better Consistency: *No ups and downs. Only ups.*

Being a world-class company with products used in over 150 countries, Soudal depends on its products to uphold its reputation for quality. We take pride in the consistency of our products, whether in the simple things such as accurate and truthful filling (750 ml means 750 ml), or in more complicated affairs such as testing and controlling the quality of raw materials and end-products. Every can is checked with automatic processes and machinery to contain the correct amount of pre-polymers, and we do extensive quality controls to ensure that every can is a can you can count on. systems.

### Different Applications Methods: *More or less - we've got you covered*

Soudal foams are available both in handheld, manual applicator versions (we also call them "straw foams"), and versions requiring a separate PU foam gun (we call them "gun foams"). Using a gun gives a better yield and generally better properties, at a slightly higher cost. Handheld foams are good for convenient, immediate usage with lower requirements. Both are world-class, exceptional-quality products.



*Fire-rated: Perfect for fire-sensitive applications*

For fire-rated applications, we have our Soudafoam FR, a PU foam with test reports that boasts a fire-rating of up to 6 hours. Extensively tested with reports from international organizations such as ETA (European Organization for Technical Approvals), ift Rosenheim GmbH, Branz, and CSTB (Centre Scientifique Et Technique Du Batiment), corresponding to standards such as EN ISO 10140-1:2010, EN ISO 717-1:2013, AS 1530.4-1997, AS 4072/1-1992, and ETA 13/0280.



*Made-in-Belgium: European standards of quality and control*

Products are only as good as their production, which is why we insist on manufacturing every single can of PU foam in our state-of-the-art production plant in Belgium. Utilizing tested-and-proven raw materials based on our proprietary formulas, and producing only on highly efficient, automated machines ensures that every single can is of the highest quality. Combine that with our stringent quality checks and controls, and you have a product you know you can count on each time, every time.

## FILL & FIX FOAM

### ONE-COMPONENT, SELF-EXPANDING POLYURETHANE FOAM WITH STRAW ADAPTER

Soudal Fill & Fix Foam with CFC-free propellant is a one-component, self-expanding, ready-to-use polyurethane foam with propellants which are completely harmless to the ozone layer. Every can comes with a straw adapter which makes applications fuss-free and simple. Each can of Soudal Fill & Fix Foam can be expected to create up to 42 litres of cured foam.

#### PROPERTIES

- Excellent adhesion on most substrates (except PTFE, PE, and PP)
- High thermal and acoustical insulation
- Very good filling capacities
- Excellent mounting capacities
- Excellent stability (no shrink or post expansion)
- Water-resistant
- Sufficient quantities of foam can create a waterproof barrier

#### APPLICATIONS

Suitable for construction and industrial applications which require filling large gaps, holes, cavities, and voids, especially where thermal and acoustic insulation is desired. Examples include filling joints during the installation of window and door frames, sealing openings in roof constructions, application of a soundproofing layer on motors, and bonding of insulation panels.

#### PACKAGING

750 ml aerosol cans, 12 cans / carton

#### COLOURS

Champagne

UP TO 42 L OF FOAM

EXCELLENT INSULATION

READY-TO-USE

## SOUDAFOAM GUN

### ONE-COMPONENT, SELF-EXPANDING, GUN-TYPE POLYURETHANE FOAM

Soudal Soudafoam Gun with CFC-free propellant is a one-component, self-expanding polyurethane foam with propellants which are completely harmless to the ozone layer. It requires the use of a specialized PU foam gun; this gun allows for ergonomic application and for achieving its large filling capacities. With a high expansion value, each 750 ml can of Soudafoam Gun can create up to 50 litres of cured foam.

#### PROPERTIES

- Excellent adhesion on most substrates (except PTFE, PE, and PP)
- High thermal and acoustical insulation
- Superb filling capacities
- Excellent mounting capacities
- Excellent stability (no shrink or post expansion)
- Water-resistant
- Sufficient quantities of foam can create a waterproof barrier

#### APPLICATIONS

Suitable for construction and industrial applications which require filling large gaps, holes, cavities, and voids, especially where thermal and acoustic insulation is desired, and where large quantities of PU foam will be used.

#### PACKAGING

750 ml aerosol cans, 12 cans / carton

#### COLOURS

Champagne

UP TO 50 L OF FOAM

EXCELLENT INSULATION

FINE CELL STRUCTURE



## SOUDAFOAM FR

### FIRE-RATED, ONE-COMPONENT SELF-EXPANDING PU FOAM WITH STRAW ADAPTER

Soudafoam FR is a single-component, self-expanding polyurethane foam which has a fire-rating and fire-resistance as tested in various accredited testing institutes, such as IFT Rosenheim, Warringtonfire, and Efectis. It can resist fire for up to 360 minutes in certain configurations (CSTB Test Report no. RS00-067).

#### PROPERTIES

- Fire resistant up to 6 hours
- Sealant for preventing the passage of smoke and gas
- Excellent adhesion on most substrates (except PTFE, PE, and PP)
- High thermal and acoustical insulation
- Very good filling and bonding properties
- Excellent stability (no shrink or post expansion)

#### APPLICATIONS

- Installation of fireproof doors and windows
- Fire and smoke retardant sealant between walls, floors, and ceilings
- Sealing of all openings in roof constructions
- Application of a sound-absorbing layer

#### PACKAGING

750 ml aerosol cans, 12 cans / carton

#### COLOURS

Pink

UP TO 42 L OF FOAM

FIRE-RESISTANT

READY-TO-USE



## GUN & FOAM CLEANER

### CLEANING FLUID TO PREVENT CLOGGING OF PU FOAM GUNS

Soudal Gun and Foam Cleaner is a ready-to-use cleaning aerosol can for use on Soudafoam Gun and Soudal foams. Cleans and partially dissolves fresh and uncured PU foam and foam stains. Also necessary for the cleaning and maintenance of PU foam guns. Fitted with regular threaded adapter for foam guns, and includes spray attachment.

#### PROPERTIES

- Highly effective in dissolving and washing off uncured PU foam
- Has a threaded screw adapter to affix cleaner on to foam gun
- Pressurized, so that cleaning fluid can be sprayed out from foam gun using trigger, dissolving and expelling uncured PU foam within gun
- Can also be used in other areas due to attachable spray nozzle

#### APPLICATIONS

Cleaning and maintenance of PU foam guns, and cleaning uncured PU foam from other areas.

#### PACKAGING

500 ml aerosol cans, 12 cartridges / carton

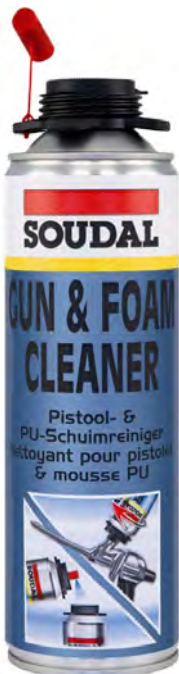
#### COLOURS

Clear

HIGHLY EFFECTIVE CLEANER

SCREW ADAPTER FOR GUNS

SPRAY NOZZLE







# COMPACT FOAM GUN

## EASY-TO-CLEAN PU FOAM GUN FOR ACHIEVING HIGH YIELD

High quality, lightweight PU foam gun for professional applications requiring precise dosing and best cell structure. A PU foam gun is required for application of Gun-type PU foams, such as Soudafoam Gun.

### PROPERTIES

- Synthetic finish for easy cleaning
- Lightweight and easy-to-use
- Long-lasting and heavy-duty
- Achieves very high yield by creating frothing action during extrusion

### APPLICATIONS

For the application of Gun-type PU foams.

### PACKAGING

1 gun per box

### COLOURS

Blue

SYNTHETIC FINISH

PRECISE DOSING

VERY HIGH YIELD



## ABOUT PFE TECHNOLOGIES

PFE Technologies is an established distribution and manufacturing company producing and supplying sealant and abrasive products.

Established in Singapore in 1978, PFE Technologies has since gained a reputation for quality, reliability, and outstanding value. PFE Technologies' mission is to deliver a superior level of services and products to achieve enduring, life-long customer satisfaction and relationships.

The company has partnered with Soudal since the 1990s. As Soudal's partner and distributor, PFE Technologies supports Soudal in stocking, distribution, technical support and customer service.

To find out more about PFE Technologies and the other products and services we provide, please visit our company website at <http://www.pfetec.sg/>.

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